

**BEFORE THE UNITED STATES  
ENVIRONMENTAL PROTECTION AGENCY**

In re:	)	EPA Docket No.
	)	
<b>Promulgation of Air Quality</b>	)	<b>EPA-R06-OAR-2015-0189</b>
<b>Implementation Plans; State</b>	)	
<b>of Arkansas; Regional Haze and</b>	)	
<b>Interstate Visibility Transport</b>	)	
<b>Federal Implementation Plan</b>	)	

**Petition for Reconsideration and Request for Stay of Entergy Arkansas Inc., et al., of the  
Promulgation of Air Quality Implementation Plans; State of Arkansas; Regional Haze and  
Interstate Visibility Transport Federal Implementation Plan**

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Entergy Arkansas Inc. (“EAI”), Entergy Mississippi Inc. (“EMI”), and Entergy Power, LLC (collectively “Entergy”) respectfully submit this petition for reconsideration and request for stay (“Petition”) of the U.S. Environmental Protection Agency’s (“EPA” or “Agency”) final “Promulgation of Air Quality Implementation Plans; State of Arkansas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan” (“Final FIP”).<sup>1</sup> As discussed below, Entergy requests that EPA reconsider and stay elements of the Final FIP that relate to Entergy’s White Bluff and Independence plants. To avoid the significant, irreparable harms that already have begun to occur, Entergy respectfully requests that EPA take action on this Petition by February 1, 2017. The administrative stay requested by Entergy would not cause adverse visibility impacts in Arkansas’ Class I areas.

**I. INTRODUCTION AND SUMMARY**

The Final FIP affects four coal-fired electric generating units owned by Entergy: two at the White Bluff Electric Power Plant (“White Bluff”) and two at the Independence Steam Electric Station (“Independence”), which will impose costs on Entergy, its co-owners and its customers of approximately \$2 billion for minimal visibility benefits. Specifically, the Final FIP requires each coal-fired unit at White Bluff and Independence to meet a sulfur dioxide (“SO<sub>2</sub>”) emission limit of 0.06 lb/MMBtu by October 27, 2021.<sup>2</sup> This emission limit is based on the installation of a dry scrubber (flue gas desulfurization (“FGD”) technology) on each unit. The Final FIP also will require each coal-fired unit to meet a nitrogen oxides (“NO<sub>x</sub>”) emission limit of 0.15 lb/MMBtu on a rolling 30-boiler operating day basis at loads of 50-100 percent of maximum heat input rating, and a rolling 3-hour average limit of 671 lb/hr at loads of less than 50 percent of maximum heat input rating.<sup>3</sup> These emission limits, which must be met beginning

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<sup>1</sup> 81 Fed. Reg. 66,332 (Sept. 27, 2016).

<sup>2</sup> *Id.* at 66,339, 66,416, 66,420.

<sup>3</sup> *Id.* at 66,416-17.

April 27, 2018, are based on the installation of low-NOx burners and separated overfire air (“LNB/SOFA”) on each unit.

The Petition must be granted because EPA failed to provide adequate notice and opportunity to comment on significant, burdensome requirements in the Final FIP that affect the requirements imposed on Entergy’s units, are of central relevance to the outcome of the Final FIP, and are not logical outgrowths of the proposed rule (“Proposed FIP”).<sup>4</sup> Additionally, the Final FIP contains clear errors that must be corrected. These administrative shortcomings demand reconsideration and a stay of key elements of the Final FIP. Specifically, Entergy requests that EPA reconsider the following:

- the imposition of reasonable progress controls on Independence;
- EPA’s determination that dry FGD technology constitutes best available retrofit technology (“BART”) for White Bluff for SO<sub>2</sub> emissions;
- the 18-month deadline for installation of NOx controls at White Bluff and Independence;
- the adoption of source-specific NOx BART in lieu of reliance on the emissions reductions resulting from implementation of the Cross-State Air Pollution Rule (“CSAPR”);<sup>5</sup> and
- the NOx limit and three-hour averaging period for NOx compliance that applies when units at White Bluff and Independence operate at low loads.

A stay of certain requirements in the Final FIP is necessary because justice so requires and to avoid irreparable harm to Entergy and its co-owners, customers, and communities while EPA reconsiders the Final FIP, and while the U.S. Court of Appeals for the Eighth Circuit (“Eighth Circuit”) considers Entergy’s petition for review of those requirements.<sup>6</sup> The pollution controls at White Bluff and Independence required by the Final FIP would cost approximately \$2 *billion* to design, permit, purchase, and install. Absent a stay, Entergy will be forced to make a costly Hobson’s choice: (1) commence designing, permitting, purchasing, and installing the required controls immediately; or (2) commence planning to decommission White Bluff and Independence by the Final FIP compliance deadline in 2021. Either course of action causes irreparable harm. The first option would require Entergy to expend \$150 million or more just within the next 18 months that could be rendered entirely unnecessary by a grant of reconsideration. The second option would require an array of costly steps planning for decommissioning the units and would ultimately lead to a host of significant harms to Entergy and its co-owners, customers, and local economies. Furthermore, Entergy could not avoid these harms by changing course at a later date, because it will either already have expended multiple millions of dollars on equipment that will serve no purpose (if it initially selected the first option), or it will be too late to install the controls in time to meet the deadline (if it initially selected the second option).

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<sup>4</sup> 80 Fed. Reg. 18,944 (Apr. 8, 2015).

<sup>5</sup> See Petition for Reconsideration and Request for Administrative Stay of Arkansas Department of Environmental Quality, at 5-8 (Nov. 22, 2016) (hereinafter “ADEQ Petition”).

<sup>6</sup> Specifically, Entergy seeks a stay of 40 C.F.R. §§ 52.173(c)(6)-(8) with respect to White Bluff and §§ 52.173(c)(24)-(26) with respect to Independence.

A stay would avoid irreparable harm yet would have no adverse impact on visibility in either Arkansas Class I area, as monitoring data show that current visibility already is better than the reasonable progress goals (“RPGs”) established by EPA for this implementation period and that visibility in the Class I areas continues to improve.

Immediate action on this Petition is urgently needed to avoid the harms described herein. Therefore, Entergy respectfully requests that EPA take action in response to this Petition by February 1, 2017. In the absence of a grant of reconsideration and stay by that time, Entergy will consider the Petition to be denied, unless the parties have jointly agreed to a longer period of time for EPA to take action on the Petition.

## **II. DESCRIPTION OF PETITIONERS**

EAI is an electric utility engaged primarily in the generation, purchase, transmission, distribution and sale of electricity in portions of Arkansas. EAI provides electrical utility service to approximately 712,000 electric customers, deriving 81 percent of its operating revenues from electric customers in 2015. EAI owns portions of White Bluff and Independence and operates both plants. EAI is a regulated utility company subject to the rate and general operating jurisdiction of the Arkansas Public Service Commission (“APSC”) and the Federal Energy Regulatory Commission (“FERC”). All of the common stock of EAI is owned by Entergy Corporation.

EMI is an electric utility engaged primarily in the generation, purchase, transmission, distribution and sale of electricity in portions of Mississippi, and is a co-owner of Independence. EMI provides electrical utility service to approximately 447,000 electric customers, deriving 89 percent of its operating revenues from electric customers in 2015. EMI is a regulated utility company subject to the rate and general operating jurisdiction of the Mississippi Public Service Commission and FERC. All of the common stock of EMI is owned by Entergy Corporation.

Entergy Power, LLC is an electric utility company that sells electric energy at wholesale and is a co-owner of Independence. Its principal business office is located in Little Rock, Arkansas. Entergy Power, LLC is an indirect wholly owned subsidiary of Entergy Corporation.

## **III. REQUEST FOR RECONSIDERATION**

### **A. Reconsideration Is Required Under Clean Air Act Section 307(d)(7)(B).**

EPA *must* grant reconsideration of a final action when a petitioner “can demonstrate to the Administrator that it was impracticable to raise [an] objection [during the period for public comment] or if the grounds for such objection arose after the period for public comment (but within the time specified for judicial review) and if such objection is of central relevance to the outcome of the rule.”<sup>7</sup> In such a situation, reconsideration is mandatory, as the Clean Air Act (“CAA”) commands that EPA “*shall* convene a proceeding for reconsideration of the rule and provide the same procedural rights as would have been afforded had the information been available at the time the rule was proposed.”<sup>8</sup> EPA must grant this Petition because

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<sup>7</sup> 42 U.S.C. § 7607(d)(7)(B).

<sup>8</sup> *Id.* (emphasis added).

(1) Entergy's objections are to actions EPA took in the Final FIP, or developments since the comment period closed, and thus could not have been raised during the comment period on the Proposed FIP; (2) the objections arose during the period for judicial review; and (3) the objections are of central relevance to the outcome of this rulemaking.

Reconsideration also is appropriate to correct clear errors, as the CAA provides for judicial invalidation of rules if errors are "so serious and related to matters of such central relevance to the rule that there is a substantial likelihood that the rule would have been significantly changed if such errors had not been made."<sup>9</sup> EPA should grant this Petition to address serious errors that are of central relevance to the Final FIP.

**B. EPA Should Reassess its Imposition of Reasonable Progress Controls on Independence in Light of More Recent Air Quality Data and Corrected Contribution Data.**

Data that became available after the close of the public comment period on the Proposed FIP confirm that reasonable progress controls on Independence for the first planning period are wholly unnecessary. Additionally, EPA's reasonable progress analysis relies on a false characterization of Independence's contribution to visibility impairment in Class I areas. EPA should reconsider the Final FIP and the controls on Independence in light of more recent air quality data, as well as corrected data regarding Independence's contribution to visibility impairment.

According to Interagency Monitoring of Protected Visual Environments ("IMPROVE") monitoring data for 2015, which became available subsequent to the close of the comment period, visibility continues to improve at a greater rate than the uniform rate of progress ("URP") in the Caney Creek Wilderness Area ("Caney Creek") and the Upper Buffalo Wilderness Area ("Upper Buffalo").<sup>10</sup> In addition, the recent IMPROVE data further confirm that visibility in the two Arkansas Class I areas already is better than the RPGs that EPA finalized for the areas. EPA set the RPGs for the 20 percent worst days at 22.47 deciviews ("dv") for Caney Creek and at 22.51 dv for Upper Buffalo.<sup>11</sup> The recent IMPROVE data for both Class I areas demonstrate that monitored visibility impairment in the areas already is well below EPA's RPGs, as well as Arkansas' RPGs, and that visibility impairment is continuing to trend downward.<sup>12</sup> Given that Caney Creek and Upper Buffalo already have surpassed the URP goals, Arkansas' RPGs, and EPA's final RPGs for the first planning period, reasonable progress controls during the first planning period are not "*necessary*" to ensure reasonable progress towards the natural visibility goal.<sup>13</sup> There is simply no standard of reasonable progress that necessitates controls on

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<sup>9</sup> 42 U.S.C. § 7607(d)(8).

<sup>10</sup> Assessment of Recent Class I Area IMPROVE Monitoring Data prepared by Trinity Consultants, Inc., at 3 (Aug. 8, 2016, updated Nov. 15, 2016) (hereinafter "Trinity Report") (attached as Exhibit A).

<sup>11</sup> 81 Fed. Reg. at 66,354.

<sup>12</sup> Trinity Report at 3. Actual visibility impairment at Caney Creek in 2015 was 20.41 dv, below Arkansas' RPG of 22.48 dv and EPA's final RPG of 22.47. Actual visibility impairment at Upper Buffalo in 2015 was 19.96 dv, below Arkansas' RPG of 22.52 and EPA's final RPG of 22.51. *Id.*

<sup>13</sup> See 42 U.S.C. § 7491(b)(2) (requiring regional haze implementation plans to contain measures "necessary to make reasonable progress toward meeting the national goal").

Independence for this planning period, especially in light of the fact that the Regional Haze Program is designed to achieve its goals over a long horizon – by 2064.

EPA also should reconsider the need for NO<sub>x</sub> controls on Independence based on a corrected understanding of the plant's contribution to visibility impairment. In the Final FIP, EPA justified the need for NO<sub>x</sub> controls on Independence based on a false characterization of the plant's contribution to visibility impairment. EPA stated that, "Entergy's CAMx modeling shows that nitrate from Independence is responsible for 30 – 40% of the visibility impairment in Arkansas' Class I areas on 2 of the 20% worst days."<sup>14</sup> This statement is false and must be corrected. EPA's statement indicates that on two of the 20 percent worst days, *30-40 percent of all impairment* at Arkansas' Class I areas is due to nitrates derived from NO<sub>x</sub> emissions from Independence. In reality, *30-40 percent of the impairment on these days that is due to nitrates* is attributable to Independence. But nitrates are a minute portion of visibility impairment at Arkansas' two Class I areas. The average total nitrate contribution from Independence to visibility impairment on these days is only 0.02 percent at Upper Buffalo and 0.03 percent at Caney Creek. Thus, the actual contribution is over three orders of magnitude less than EPA stated.

Entergy had no opportunity to comment on this mischaracterization of Independence's nitrate contribution to visibility impairment, which is of central relevance to the outcome of the rule. EPA should correct this mischaracterization and clearly acknowledge that the contribution of Independence to visibility impairment in Arkansas' Class I areas is almost meaningless.

In sum, EPA should reconsider the necessity of reasonable progress controls for Independence in light of the recent IMPROVE monitoring data as well as a corrected assessment of Independence's contribution to visibility impairment in Arkansas' Class I areas.

**C. The SO<sub>2</sub> BART Determination in the Final FIP for White Bluff Failed to Consider Critical Information.**

**1. EPA materially misunderstood Entergy's comments regarding EPA's proposed SO<sub>2</sub> BART determination for White Bluff.**

The Final FIP imposes SO<sub>2</sub> limits on White Bluff Units 1 and 2 premised on the installation of dry FGD, which EPA found to be cost-effective based on a 30-year amortization period.<sup>15</sup> EPA failed to consider Entergy's proposal to cease combusting coal in 2027 and 2028, which would limit the remaining useful coal-fired lives of the units and significantly alter the cost-effectiveness of SO<sub>2</sub> controls.<sup>16</sup> Entergy had no notice of or opportunity to timely comment

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<sup>14</sup> 81 Fed. Reg. at 66,359.

<sup>15</sup> *Id.* at 66,335, 66,360.

<sup>16</sup> Entergy Arkansas Inc. Comments on the Proposed Regional Haze and Interstate Visibility Transport Federal Implementation Plan for Arkansas, at 5 (Aug. 7, 2015) (Docket ID No. EPA-R06-OAR-2015-0189-0153) (hereinafter "EAI Comments") (attached as Exhibit B).

on EPA's failure, which was only evident in the Final FIP and EPA's associated Response to Comments.<sup>17</sup>

In the Final FIP, EPA unreasonably mischaracterized Entergy's White Bluff proposal, resulting in the Agency's failure to properly determine BART for White Bluff Units 1 and 2. EPA acknowledged that a binding requirement to cease combustion of coal at White Bluff would limit the remaining useful lives of Units 1 and 2 for the purpose of evaluating SO<sub>2</sub> controls, but mistakenly assumed that Entergy had not offered such a proposal. EPA explained, "If Entergy's alternative proposal had included accepting a binding requirement to burn only natural gas at White Bluff Units 1 and 2 after coal combustion ceases, or a binding requirement to completely shut down the units, *then we would agree that it would be appropriate to assume that SO<sub>2</sub> emissions from White Bluff will be zero beginning in 2027/2028.*"<sup>18</sup> However, contrary to EPA's assertion, Entergy explicitly made such a commitment in its comments on the Proposed FIP:

As part of a multi-unit plan to improve visibility and to better manage its generation assets for reliability and costs, Entergy proposes to cease burning coal at White Bluff Units 1 and 2 by 2027 and 2028, one unit per year, *and is prepared to take an enforceable commitment to that effect.*<sup>19</sup>

EPA's conclusion that Entergy "does not propose...adopting a binding requirement to burn only natural gas or completely shut down the units"<sup>20</sup> is inexplicable in light of the plain language of Entergy's proposal. Because EPA determined that a binding requirement to cease burning coal would allow the Agency to assume that SO<sub>2</sub> emissions would be zero subsequent to the cessation of coal combustion, EPA must reconsider the SO<sub>2</sub> BART determination for White Bluff. Failure to do so is unreasonable and arbitrary and capricious.

EPA also asserted that Entergy's proposal to cease using coal at White Bluff appeared tied to EPA's acceptance of Entergy's separately proposed emission limits for Independence.<sup>21</sup> That assertion is incorrect. Nowhere in its comments did Entergy claim that its acceptance of a binding requirement to cease burning coal at White Bluff Units 1 and 2 was contingent on EPA's agreement to the emission limits that Entergy was proposing for Independence. Although Entergy proposed an approach addressing all four coal-fired units at White Bluff and Independence and provided modeling of its proposal demonstrating that its approach would achieve virtually the same visibility benefits as EPA's Proposed FIP for significantly less cost,<sup>22</sup> Entergy did not indicate that its proposed emission limits for Independence were a necessary element of its White Bluff proposal. In fact, in its comments, Entergy explicitly stated that the

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<sup>17</sup> 81 Fed. Reg. at 66,335, 66,360; Response to Comments for the Federal Register Notice for the State of Arkansas; Regional Haze and Interstate Visibility Transport Federal Implementation Plan, at 52-54 (Aug. 31, 2016) (Docket ID No. EPA-R06-OAR-2015-0189-0187).

<sup>18</sup> 81 Fed. Reg. at 66,356-57 (emphasis added).

<sup>19</sup> EAI Comments at 5 (emphasis added).

<sup>20</sup> 81 Fed. Reg. at 66,356.

<sup>21</sup> *Id.* at 66,358 ("Entergy's comments provide no indication that it is willing to accept a binding requirement to cease coal combustion at White Bluff by 2027/2028, unless we also accept the elements of its alternative proposal that are applicable to Independence as satisfying the reasonable progress requirements.").

<sup>22</sup> EAI Comments at 45-46.

interim emissions reductions it offered, which included the emission limits for Independence, were a *complement* to its proposal for White Bluff.<sup>23</sup>

**2. EPA did not account for Entergy's proposal regarding the remaining useful life of White Bluff in analyzing SO<sub>2</sub> controls.**

Had EPA appropriately characterized Entergy's proposal for White Bluff, EPA would have used a shorter remaining useful life for White Bluff in its BART analysis. Proper accounting of remaining useful life is critical because, as EPA acknowledged in the Final FIP, "a shorter remaining useful life [at White Bluff Units 1 and 2] might result in a conclusion that dry scrubbers are not cost-effective...."<sup>24</sup> Indeed, as explained in Entergy's comments, Entergy's proposal for White Bluff rendered EPA's proposed BART determination inapplicable, requiring EPA to undertake a new BART analysis to address the remaining useful coal-fired life of the units.<sup>25</sup> Because EPA's FGD cost-effectiveness analysis failed to take into account Entergy's proposed binding commitment to cease combusting coal at White Bluff, a failure on which Entergy could not previously have provided comment, EPA must reconsider this issue. In doing so, EPA also should reconsider the cost-effectiveness of dry scrubbers in light of the correct control cost information, as explained in the following section.

**3. Dry FGD is not cost-effective at White Bluff.**

EPA calculates that installing and operating dry FGD at White Bluff would cost \$2,565 per ton of SO<sub>2</sub> removed for Unit 1 and \$2,421 per ton of SO<sub>2</sub> removed for Unit 2.<sup>26</sup> However, these cost estimates fail to account for Entergy's proposal, discussed above, regarding the remaining useful life of the units as well as data regarding the actual cost of controls. Had this information been properly considered, EPA should have estimated that the costs per ton of SO<sub>2</sub> removed would range from approximately \$7,100 to \$8,000 per ton of SO<sub>2</sub> removed, which is patently *not* cost-effective.<sup>27</sup>

EPA's cost estimate *failed to include over \$495 million* that Entergy will be required to incur to install dry FGD on the White Bluff units.<sup>28</sup> EPA rejected certain costs in the analysis prepared for Entergy by Sargent & Lundy because Entergy did not provide to EPA the underlying 2009 and 2013 Alstom quotes on which Sargent & Lundy's cost analysis relied.<sup>29</sup> Because Entergy had no notice that EPA would require submission of these quotes, which contain non-public, highly confidential and proprietary information, to validate Entergy's cost analysis, Entergy is providing redacted versions of these quotes now.<sup>30</sup> The Alstom quotes

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<sup>23</sup> *Id.* at 4 ("Entergy is prepared to offer meaningful interim emission reductions to complement its proposed commitment to cease coal-fired operations at White Bluff and assure that Arkansas remains on a path that is below the URP for the long term.").

<sup>24</sup> 81 Fed. Reg. at 66,356.

<sup>25</sup> EAI Comments at 5.

<sup>26</sup> 81 Fed. Reg. at 66,386.

<sup>27</sup> Memorandum from Sargent & Lundy (Nov. 18, 2016) (hereinafter "Sargent & Lundy Memo") (attached as Exhibit C).

<sup>28</sup> *See* Sargent & Lundy Memo at 2.

<sup>29</sup> 81 Fed. Reg. at 66,383.

<sup>30</sup> 2009 Alstom Report (attached as Exhibit D) and 2013 Alstom Report (attached as Exhibit E). These reports contain confidential business information. Non-pertinent information has been redacted.

demonstrate that EPA improperly excluded extensive costs associated with “Balance of Plant” items, which are items not included in the FGD supplier’s scope, but which are necessary to integrate the FGD system into the plant.<sup>31</sup> The quotes also demonstrate that EPA underestimated escalation by using the Chemical Engineering Plant Cost Indices (“CEPCI”) instead of relying on more accurate information from the vendor.

The more detailed and accurate cost analysis prepared by Sargent & Lundy, which includes costs improperly excluded by EPA and correctly predicts tons removed, estimates that dry FGD cost-effectiveness will range from approximately \$7,100 to \$8,000 per ton if the units cease combusting coal in 2027-2028.<sup>32</sup> Even if certain costs rejected by EPA were excluded in Sargent & Lundy’s cost estimate (i.e., allowance for funds used during construction (“AFUDC”), escalation, and owner’s costs), the cost-effectiveness of dry FGD at White Bluff would range from approximately \$5,400 to \$6,100 per ton.<sup>33</sup> Regardless of which estimate is used, these costs exceed those that EPA has previously rejected in other BART analyses and thus are too high to represent BART for the White Bluff units.<sup>34</sup> As a result, dry FGD cannot constitute SO<sub>2</sub> BART for White Bluff Units 1 and 2. Accordingly, EPA should reconsider the White Bluff SO<sub>2</sub> BART.

#### **4. EPA must reconsider SO<sub>2</sub> BART for White Bluff even in the absence of a DSI analysis.**

In the Final FIP, EPA argues, for the first time, that it would be necessary to assess dry sorbent injection (“DSI”) as an interim control if the White Bluff units cease to combust coal, and indicates that this lack of DSI analysis somehow negates EPA’s obligation to conduct a reasonable BART analysis of dry FGD at the White Bluff units. Entergy did not have notice of or an opportunity to comment on this assertion, which is of central relevance to the Final FIP. The lack of a DSI analysis, which EPA had not previously requested, does not absolve EPA of its obligation to properly assess the cost-effectiveness of dry FGD.

EPA explains in the Final FIP that “[b]ecause Entergy has provided no analysis to demonstrate that there is no more effective interim SO<sub>2</sub> control that would constitute BART, the company’s proposed strategy is not adequate to ensure that the BART requirements for White Bluff Units 1 and 2 will be met.”<sup>35</sup> EPA ties the lack of a DSI analysis to its determination that it

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<sup>31</sup> Upon further review, Sargent & Lundy determined that costs associated with ductwork downstream of the booster fans were included in the Alstom quote. The updated cost estimates in this Petition remove these costs. Sargent & Lundy Memo at 2.

<sup>32</sup> *Id.* at 3.

<sup>33</sup> *Id.*

<sup>34</sup> EPA declined to impose dry FGD as BART in Arizona, where the average cost effectiveness was estimated to be \$5,090/ton. Proposed Arizona Regional Haze FIP, 79 Fed. Reg. 9,317, 9,331-33 (Feb. 18, 2014); Final Arizona Regional Haze FIP, 79 Fed. Reg. 52,420, 52,436 (Sept. 3, 2014). In North Dakota, EPA approved the state’s determination that a cost effectiveness of \$6,525 per ton was excessive for NO<sub>x</sub> controls and did not constitute BART. Proposed North Dakota FIP, 76 Fed. Reg. 58,570, 58,630 (Sept. 21, 2011); Final North Dakota Regional Haze FIP, 77 Fed. Reg. 20,894, 20,896 (Apr. 6, 2012). And, in Montana, EPA concluded that certain SO<sub>2</sub> controls with a cost effectiveness of \$5,442/ton and \$6,365/ton were not cost effective. Proposed Montana Regional Haze FIP, 77 Fed. Reg. 23,988, 24,047 (Apr. 20, 2012); Final Montana Regional Haze FIP, 77 Fed. Reg. 57,864, 57,866 (Sept. 18, 2012).

<sup>35</sup> 81 Fed. Reg. at 66,356.

need not even consider Entergy's finding that FGD is not cost-effective in light of its proposal for White Bluff. This is a false premise; the appropriateness of DSI as an interim control measure is irrelevant to the assessment of whether dry FGD is cost-effective. As outlined above, EPA failed to account for the proposed remaining useful life of Units 1 and 2 when assessing dry FGD as a control technology, as well as certain costs associated with such controls, and must do so now on reconsideration. To the extent that EPA *also* believes that an assessment of DSI as a potential control technology is warranted, such assessment is wholly independent of the FGD assessment.

Despite the fact that EPA's request for a DSI analysis arose for the first time in the Final FIP, Entergy is willing to develop and provide the analysis if EPA grants reconsideration on SO<sub>2</sub> BART for White Bluff. Additionally, Entergy understands that the Arkansas Department of Environmental Quality ("ADEQ") will develop a state implementation plan ("SIP") to replace portions of the Final FIP, including the BART controls for White Bluff, and Entergy will submit a DSI analysis to ADEQ, if required, as part of the SIP development process.

**D. EPA's LNB/SOFA Assumptions Are Unsupported and Unreasonable, and Must Be Revised.**

EPA should reconsider whether NO<sub>x</sub> controls should be required for either White Bluff or Independence. As addressed in Section III.A above, NO<sub>x</sub> controls on Independence to address reasonable progress are unnecessary for this first planning period. Further, EPA should reconsider its imposition of source-specific NO<sub>x</sub> BART controls in the Final FIP and instead determine that compliance with CSAPR is acceptable for compliance with the NO<sub>x</sub> BART requirements in Arkansas, including for White Bluff, as addressed more fully in ADEQ's Petition for Reconsideration and Request for Administrative Stay.<sup>36</sup>

However, if EPA denies reconsideration on these threshold issues, EPA must grant reconsideration on the compliance deadline and NO<sub>x</sub> emission limits applicable to both White Bluff and Independence. The compliance deadline and NO<sub>x</sub> limits are not logical outgrowths of the Proposed FIP, are not reasonable and fraught with errors, and are of central relevance to EPA's determination of NO<sub>x</sub> BART in the rulemaking.

**1. EPA must extend the 18-month timeline for the installation of LNB/SOFA to Three Years.**

**a. The 18-month deadline is not a logical outgrowth of the proposed rule and was promulgated in error.**

The Final FIP unlawfully shortens the compliance deadline for the NO<sub>x</sub> emission limits for White Bluff and Independence from three years to 18 months.<sup>37</sup> EPA proposed a three-year NO<sub>x</sub> compliance deadline for these plants and did not indicate in the Proposed FIP that it was considering a shorter deadline. The 18-month deadline is not a logical outgrowth of the proposed compliance deadline. While Entergy stated in its comments that it was prepared to

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<sup>36</sup> ADEQ Petition at 5-8.

<sup>37</sup> 81 Fed. Reg. at 66,338, 66,354.

meet the proposed three-year deadline,<sup>38</sup> it lacked notice and had no opportunity to comment on its ability to comply with a shortened compliance deadline.

EPA erred in relying on comments from environmental organizations when contracting the compliance timeline.<sup>39</sup> First, the environmental organizations requested a shorter compliance deadline only for White Bluff, not for Independence.<sup>40</sup> Indeed, while the organizations asserted that LNB/SOFA could be installed on Independence in under a year, the comment concluded that “three years is more than reasonable.”<sup>41</sup> Even if the environmental organizations had requested a shortened compliance deadline for both plants, it is well-established that EPA “cannot bootstrap notice from a comment.” *Small Refiner Lead Phase-Down Task Force v. EPA*, 705 F.2d 506, 549 (D.C. Cir. 1983); *Am. Fed’n of Labor v. Donovan*, 757 F.2d 330, 340 (D.C. Cir. 1985).

Further, the environmental organizations’ comments on installation of LNB/SOFA fail to provide a reasonable justification for the shorter compliance timeline. The comments were based on an expert report, which, in turn, relied on a 10-year-old vendor association report that did not consider permitting considerations, a company’s internal project development and approval process, site-specific factors, or reliability concerns.<sup>42</sup> The vendor association report explicitly recognized that “[v]ariations in the schedule may occur due to site specific conditions that may increase or decrease the typical deployment time.”<sup>43</sup> The vendor report also does not appear to allow sufficient time for testing and optimization of equipment, providing only one week for commissioning and startup.<sup>44</sup> Because the environmental organization comments relied on outdated, generic information about timing, they do not provide a proper basis for the shortened deadline for these specific units. Notably, EPA has not even attempted to provide any explanation of how this shorter deadline is reasonable for White Bluff and Independence in light of site-specific and company-specific considerations. Nor does EPA appear to have required such a short timeframe for the installation of controls in other regional haze plans. Even for AEP’s Flint Creek plant, where SO<sub>2</sub> control equipment *is installed and functioning already*, EPA granted the company 18 months to make any modifications necessary to ensure the controls can meet the BART limit.<sup>45</sup>

**b. The 18-month deadline is unreasonable.**

The 18-month deadline to install LNB/SOFA at White Bluff and Independence is infeasible, as it does not guarantee sufficient time to develop, plan, permit, install, tune, and test the equipment. Specifically, a project of this scope requires Entergy to develop a prevention of significant deterioration (“PSD”) permit application, obtain a PSD permit, comply with the

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<sup>38</sup> EAI Comments at 13-14.

<sup>39</sup> 81 Fed. Reg. at 66,378.

<sup>40</sup> Comments of Earthjustice, National Parks Conservation Association, and Sierra Club at 25 (Aug. 7, 2015) (Docket ID No. EPA-R06-OAR-2015-0189-0153) (hereinafter “Sierra Club Comments”).

<sup>41</sup> *Id.* at 39.

<sup>42</sup> *Id.* at 25; Technical Support Document to Comments of Conservation Organizations, Prepared by Victoria R. Stamper, at 46 (Aug. 5, 2015) (Docket ID No. EPA-R06-OAR-2015-0189-0171) (hereinafter “Stamper Report”).

<sup>43</sup> Typical Installation Timelines for NO<sub>x</sub> Emission Control Technologies on Industrial Sources, Institute of Clean Air Companies, at 4 (Dec. 4, 2006), available at [https://c.ymcdn.com/sites/icac.site-ym.com/resource/resmgr/ICAC\\_NOx\\_Control\\_Installatio.pdf](https://c.ymcdn.com/sites/icac.site-ym.com/resource/resmgr/ICAC_NOx_Control_Installatio.pdf).

<sup>44</sup> *Id.*

<sup>45</sup> 81 Fed. Reg. at 66,338.

company's internal planning and prudence review procedures, complete a request for proposal ("RFP") process, select a vendor, procure equipment, schedule outages, install equipment, and then tune and test the equipment. Completion of all of these steps will require more than 18 months, even though Entergy already has obtained the necessary PSD permit for White Bluff, and is in the process of developing the PSD permit application for Independence.<sup>46</sup> Entergy would only be able to complete installation and tuning of LNB/SOFA on all four units by the final deadline if it circumvented its internal planning and prudence review procedures and completed the tuning and testing process *after* the compliance deadline.

The internal process that must be completed before the performance of any equipment work is robust, with preparation for this work just getting underway with respect to Independence. First, projects over \$20 million, like the installation of LNB/SOFA, are subject to an internal company approval process that includes risk review and investment procedures. This process takes approximately two months and requires approval from several levels of Entergy management. Once the review process has been completed, Entergy can undertake project-specific planning. An engineer will draft project specifications based on the Final FIP requirements and design characteristics, a process that takes approximately two months. These specifications will be included in an RFP, which will be put out for a four- to six-week bidding process. Once a vendor is selected, negotiation of the final contract will take an additional four to six weeks.

Simultaneous to this internal process, Entergy must prepare a PSD permit application for the installation of LNB/SOFA at Independence.<sup>47</sup> Despite the fact that work already is proceeding, the earliest the application will be ready for submittal to ADEQ will be mid-December. ADEQ approval is expected to take, at a minimum, between six and eight months, resulting in permit issuance between mid-June and mid-August 2017, but this process could take longer for a variety of reasons outside of Entergy's control. For example, the permitting process could be extended if significant public comments are received on the draft permit that must be addressed by the ADEQ before a final permit can be issued, due to agency resource constraints, or due to an appeal of the final permit to the Arkansas Pollution Control and Ecology Commission, which, absent additional regulatory proceedings, would result in an automatic stay of the permit pending final resolution of the appeal.

Once the permit is issued and the final contract has been signed, the selected vendor must design and fabricate the equipment, which takes approximately eight months. Outages must be scheduled for all four units, each lasting between six and seven weeks. Once installation is complete, each unit will need to undergo four weeks of boiler tuning and two weeks of performance verification testing to demonstrate that the controls are achieving the anticipated NOx reductions. After this, Entergy will have to perform a final phase of fine-tuning and training. During the final phase, which lasts approximately five months, each unit will undergo a three-month procedure review during which the system description is re-written to include the new equipment and components, and the operating procedures are updated. This process cannot

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<sup>46</sup> Although Entergy already has acquired control equipment for one unit at White Bluff, equipment still must be obtained for the second White Bluff unit and both Independence units to comply with the requirements in the Final FIP.

<sup>47</sup> As noted above, Entergy already has obtained a permit to install LNB/SOFA on White Bluff but does not yet have all the equipment needed to do so.

be truncated as it requires the operators to observe performance during all operating scenarios, including startup, shutdown, and periods of load transition. The staff must then be trained on both the system description and the operating procedures, which typically takes a month. An additional month is needed to validate operating configurations to determine which combinations result in the best load profile. It would be imprudent not to complete the entire training and fine-tuning process prior to the compliance deadline.

Even with a truncated schedule, Entergy cannot reasonably expect to meet the 18-month deadline. At best, Entergy could take the following steps, which increase risk and cost without any guarantee of compliance. It could circumvent its normal internal procedures, including its risk and prudence reviews and its process for obtaining competitive bids from multiple vendors. Entergy would be required to perform a more limited risk and prudence review, would have to forgo a complete bidding process in favor of using a pre-selected vendor that can fabricate and install the equipment as quickly as possible, and may even need to engage this vendor prior to having all regulatory approvals in hand. These internal procedures are in place to attempt to ensure cost recovery, and failure to comply with them puts the company at risk of making investments that the APSC later determines are not in the public interest and therefore not eligible for cost recovery. The schedule also does not allow for any delays associated with the PSD permitting process.

Finally, even with these truncated procedures, and assuming final PSD permit issuance in mid-June to mid-August 2017, the timeframe allowed in the Final FIP is insufficient for Entergy to conduct thorough testing and tuning of the NOx control equipment, where unforeseen issues frequently arise and must be addressed to ensure compliance. For example, it is common during the installation process to discover previously unknown equipment issues that complicate installation or hinder the expected performance of the installed equipment. Installation of controls involves many variables and each unit has unique characteristics, resulting in unpredictable challenges. As an example, small, unforeseen differences in mill performance or coal pulverization could result in problems that must be addressed to ensure the LNB/SOFA equipment performs as expected.

In light of these site-specific considerations, including the mandatory regulatory approval process, EPA should grant reconsideration and revise the 18-month deadline to provide the full three years provided in the Proposed FIP for installation of LNB/SOFA at White Bluff and Independence. This will allow time for Entergy to comply with its internal planning and prudence review procedures, to obtain all required approvals, and ensure that the controls are properly tuned prior to the compliance deadline. At a minimum, EPA should grant reconsideration and provide at least 30 months for the installation of LNB/SOFA at White Bluff and Independence as this is the minimum amount of time Entergy anticipates that the NOx compliance deadline could be met even by truncating its internal procedures and barring any unforeseen issues.

**2. EPA must revise the NOx limit and averaging period that apply during periods of low load.**

In the Final FIP, EPA unlawfully introduced, for the first time, a NOx emission limit of 671 lb/hr on a rolling 3-hour average that applies when the White Bluff and Independence units are operating at less than 50 percent of their maximum heat input capacity.<sup>48</sup> In contrast, EPA had proposed an emission limit of 0.15 lb/MMBtu on a 30 boiler-operating-day rolling average that would apply regardless of the capacity at which the units were operating.<sup>49</sup> Entergy did not have notice of or an opportunity to comment on the significant change in the Final FIP to the limit and averaging period that apply when the units are operating at low loads. Entergy explained in its comments on the Proposed FIP that a higher limit is necessary during periods of low load operation because the LNB/SOFA system is designed to operate primarily in the range of 50-100 percent of unit load, and the vendor would not guarantee that LNB/SOFA could meet a limit of 0.15 lb/MMBtu for operating loads below 50 percent.<sup>50</sup> While Entergy appreciates EPA's apparent attempt to account for periods of low load in the Final FIP, EPA must reconsider the emission rate and averaging period that apply when the units are operating at less than 50 percent of the maximum heat input capacity.

First, Entergy did not have an opportunity to comment on the new emission limit and averaging period that apply during low load operation. EPA has not explained why either the limit that it established or the shorter averaging period are appropriate for either White Bluff or Independence, given that they were not raised or considered in the Proposed FIP or in Entergy's comments. The final limit and averaging period are not logical outgrowths of the Proposed FIP and they are plainly unlawful, arbitrary and capricious. EPA must grant reconsideration of these elements of the Final FIP.

Second, the new averaging period is unworkable for low load operation and will result in exceedances of the limit. During periods of load transition and, in particular, periods of reduced load, NOx is very sensitive to changing conditions such as air flow, fuel flow, and burner tilt position. When load is being ramped up or down, and mills are put in or out of service, NOx can spike to levels well above typical levels for short periods of time. Within minutes of the excursion, NOx typically will return to and stabilize at the steady state level. With the short 3-hour averaging period, a single 15-minute spike in NOx could result in NOx exceeding the low-load NOx emission limit for a 3-hour period, even if the remaining 165 minutes were below compliance levels.<sup>51</sup> A 30-boiler-operating-day period is necessary to moderate the variations in NOx due to load transition and low load.

Finally, the low-load NOx emission limit, which EPA set at one half the limit proposed by Entergy, also is problematic. It offers no compliance margin, which is necessary to account for increased NOx levels that occur as a function of low load operation, and the unavailability of SOFA when the unit is operated at less than 30 percent of capacity. When load falls below 50 percent, NOx levels increase as a percentage of heat input, trending upwards as load is reduced. This phenomenon is due to the increased levels of excess air that are used to ensure safe boiler

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<sup>48</sup> 81 Fed. Reg. at 66,344, 66,354.

<sup>49</sup> 80 Fed. Reg. at 18,974, 18,997.

<sup>50</sup> EAI Comments at 50.

<sup>51</sup> See Memorandum from Foster Wheeler (hereinafter "Foster Wheeler Memo") (attached as Exhibit F).

operation during low loads. During load swings, control systems lead load increases with increases in air flow and follow load decreases with reductions in air flow. This excess air leads to NO<sub>x</sub> formation from nitrogen-laden air. Not only are NO<sub>x</sub> emissions generated at a higher rate at low load, but NO<sub>x</sub> control options are limited during these periods. SOFA is unavailable when the boiler operates below 30 percent capacity, including during startup, because there is insufficient air to support both good combustion and maintain overfire air flow to the boiler. As a result, the SOFA system cannot provide any NO<sub>x</sub> reduction during these operational periods.

Accordingly, EPA should reconsider the NO<sub>x</sub> limit and averaging time that applies to periods of low load operation and adopt the limit requested by Entergy in its comments: a rolling 30-boiler operating day average emission rate of 1,342.5 lb NO<sub>x</sub>/hr at each coal-fired unit at White Bluff and Independence.<sup>52</sup> At the least, EPA should revise the NO<sub>x</sub> averaging time to a 30-boiler-operating day period, and the limit to 895 lb/hr.<sup>53</sup> This will allow the inevitable NO<sub>x</sub> variations to be smoothed out over the averaging period, resulting in a limit that is possible to achieve.

#### **IV. REQUEST FOR STAY**

##### **A. EPA Should Grant a Stay Pursuant to the CAA and the APA.**

Section 307(d)(7)(B) of the CAA authorizes EPA to stay the effectiveness of a rule for up to three months during reconsideration,<sup>54</sup> which can be extended for additional three-month periods. Additionally, the Administrative Procedure Act (“APA”) authorizes EPA to stay the effectiveness of a rule indefinitely. Under the APA, “[w]hen an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review.”<sup>55</sup> EPA has applied this standard to CAA actions.<sup>56</sup>

Unlike a judicial stay, an administrative stay does not require a demonstration of irreparable harm. The APA states:

When an agency finds that justice so requires, it may postpone the effective date of action taken by it, pending judicial review. On such conditions as may be required and to the extent necessary to prevent irreparable injury, the reviewing court . . . may issue all necessary and appropriate process to postpone the effective date of an agency action or to preserve status or rights pending conclusion of the review proceedings.<sup>57</sup>

The APA deliberately contrasts what is required for an administrative stay—“justice so requires”—and a judicial stay—“conditions as may be required” and “irreparable harm.” Similarly, CAA Section 307(d)(7)(B) authorizes an administrative stay, but does not premise that

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<sup>52</sup> EAI Comments at 49.

<sup>53</sup> Foster Wheeler Memo at 4.

<sup>54</sup> See 42 U.S.C. § 7607(d)(7)(B).

<sup>55</sup> 5 U.S.C. § 705.

<sup>56</sup> See, e.g., Prevention of Significant Deterioration (“PSD”) and Nonattainment New Source Review (“NSR”): Aggregation, 75 Fed. Reg. 27,643 (May 18, 2010).

<sup>57</sup> 5 U.S.C. § 705. EPA has stayed a rule pursuant to Section 705 even after the rule’s effective date has passed. See *Stay of Federal Water Quality Criteria for Metals*, 60 Fed. Reg. 22,228 (May 4, 1995).

stay on a finding of irreparable injury, noting simply that “[t]he effectiveness of the rule may be stayed during such reconsideration...for a period not to exceed three months.”<sup>58</sup>

EPA should administratively stay the Final FIP’s emission limitations for White Bluff and Independence while it addresses the issues identified above in Entergy’s Petition, and while the Eighth Circuit considers Entergy’s petition for review of the Final FIP. Specifically, Entergy requests that EPA stay 40 C.F.R. §§ 52.173(c)(6)-(8) with respect to White Bluff and §§ 52.173(c)(24)-(26) with respect to Independence. As explained below, a delay in implementation of the FIP would prevent harms to Entergy, with negligible visibility impact, while the Final FIP is reviewed. An administrative stay also would allow ADEQ time to develop its replacement SIP.

## **B. Justice Requires that EPA Grant a Stay.**

### **1. Compliance with the SO<sub>2</sub> limits would immediately and irreparably harm Entergy, its co-owners, employees, customers, and communities.**

To meet the Final FIP’s SO<sub>2</sub> emission limits at White Bluff and Independence, Entergy must make plans for compliance now. Implementation of the Final FIP requires Entergy to make a Hobson’s choice as soon as possible to either (1) permit, design, gain regulatory approval for, construct, install, and tune dry scrubbers on all four units by October 27, 2021, or (2) deactivate the units by that date, eliminate 230 Entergy jobs in rural Arkansas,<sup>59</sup> dramatically reduce the local tax revenues, and commit to new resources to replace a significant portion of its generating capacity. Either path for compliance with the SO<sub>2</sub> emission limits at White Bluff and Independence is a complex undertaking that must be pursued independently for each unit, and will result in immediate and irreparable harm to Entergy, its co-owners,<sup>60</sup> and local economies.

To ensure compliance, either path would require Entergy to begin making commitments and significant financial investments in the immediate future and without state agency review of the proposed path. Entergy must pursue both potential paths for as long as there is regulatory uncertainty.<sup>61</sup> Entergy would suffer irreparable harm if it is forced to proceed before EPA acts

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<sup>58</sup> 42 U.S.C. § 7607(d)(7)(B).

<sup>59</sup> Entergy also directly employs several hundred contractors over the course of the year, for both seasonal outage work and ongoing plant support.

<sup>60</sup> As described in petitions for reconsideration of the Final FIP filed by co-owners of the White Bluff and Independence plants, the harms to these co-owners would be significant. For example, deactivation of both plants in October of 2021 would create the immediate need to add an estimated 500 megawatts (“MW”) of firm generation capacity to the Midcontinent Independent System Operator (“MISO”) side of the Arkansas Electric Cooperative Corporation (“AECC”) system. This replacement capacity is estimated to require the investment of \$490,000,000. The levelized investment recovery cost of this generation capacity to AECC’s member cooperatives would be approximately \$34,000,000 annually. Jonesboro City Water and Light estimates that replacement of its share of ownership of the generation capacity of the White Bluff and Independence units in 2021 would result in increased costs between \$16.3 million and \$25 million, *in 2021 alone*, which translates to a 17-27 percent increase in customer rates. See Petition for Reconsideration and Request for Administrative Stay of AECC and Petition for Reconsideration and Request for Administrative Stay of Energy & Environmental Alliance of Arkansas (“EEAA”).

<sup>61</sup> Either choice would cause irreparable harm in so far as significant financial investments would need to be made that could not be reversed if the Final FIP were later revised or vacated. Additionally, due to the lead time needed to install FGD technology or to prepare for permanent retirement, more time is needed to select one of these two options than the Final FIP allows. As described in this section, regulatory reviews are required for both paths, so the

on the Petition and before the Eighth Circuit determines the merits of Entergy's petition for review of the Final FIP. And yet, to meet the compliance deadline, it will be compelled to do so or risk noncompliance with the Final FIP. The first path, installing dry scrubbers on all four units, would be a massive undertaking costing approximately \$2 billion. The first phase of this multi-phase project would have to begin as soon as the decision to proceed was made, as the process would require the entirety of the five years allotted in the Final FIP, as explained in further detail below, including spending over \$150 million in the first 18 months alone. The second path, deactivating the units, is complicated and costly in different ways, as explained below. Both paths cause Entergy irreparable harm.

Given the lead times for either path, Entergy must start immediately to conduct analyses and reviews to support its internal decision-making process, which will take several months. Entergy's internal review process would assess both approaches, particularly analyzing and comparing the economics of each approach, and would be coordinated with the co-owners of White Bluff and Independence. Assessing the costs of the two approaches is extremely complicated. For example, for EAI to retire an existing generating unit, EAI must provide at least six months' notice to MISO, the regional transmission operator that dispatches White Bluff and Independence, of its intent to retire the unit. Because of the interconnected nature of the electric grid, a decision to retire a unit can have implications for the remainder of the grid, some of which may require upgrades to the transmission system to ensure that the grid can be operated reliably after the generating unit is retired. Accordingly, owners/operators of a generating unit typically would request that MISO perform an "Attachment Y-2 study," which would determine, on a non-binding basis, whether the retirement of the generating unit (i.e., White Bluff or Independence) would impact transmission system reliability, or whether the plant would need to continue to operate until transmission upgrades or other system changes to maintain reliability can be completed. In Entergy's experience, an Attachment Y-2 study takes approximately three to four months for a standard request. However, this situation is far from standard; assessing the retirement of four units totaling nearly 3400 MW of capacity may take much longer. Entergy would incorporate the Attachment Y-2 results into its internal economic analysis. Depending on the time needed to perform the economic analysis, coordinate with co-owners, and obtain the results of MISO's Attachment Y-2 study, this decision-making process would take between six and nine months.

Compliance with the FIP also requires EAI, the operator of all four units, along with the other co-owners of White Bluff and Independence to adhere to other regulatory processes, each unique to each co-owner.<sup>62</sup> In similar cases involving significant capital investments at existing generating units, EAI has sought a declaratory order from the APSC confirming that the selected path is in the public interest.<sup>63</sup> Because EAI is a rate-regulated entity, costs prudently incurred in the provision of electrical service typically are recoverable from customers, but cost recovery can occur only after the costs are reviewed by the APSC and a regulatory rate adjustment is made. In

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compressed timeline mandated by the Final FIP requires Entergy to simultaneously prepare for both paths in the event that the selected path does not earn regulatory approval.

<sup>62</sup> For example, EMI also has regulatory reviews and approvals before the Mississippi Public Service Commission that it must pursue. *See also* Petition for Reconsideration and Request for Stay of Energy and Environmental Alliance of Arkansas.

<sup>63</sup> *See, e.g.*, APSC Docket No. 09-024-U (Seeking public interest finding for installation of environmental controls at White Bluff Units 1 and 2).

other words, a public interest finding addresses the prudence of the investment; it does not address the prudence of the management of the incurrence of the costs nor does it modify base rates or effect other charges to include those costs (which would be the result of a separate review by the APSC in a later proceeding). If cost recovery is not approved or if recovery is significantly delayed, EAI could be deprived of a reasonable opportunity to receive adequate recovery of costs incurred.<sup>64</sup> In either case, the preparation of the application and supporting testimony could take up to six months. Additionally, completion of discovery, an APSC-determined procedural schedule with multiple rounds of testimony from the APSC General Staff, Attorney General, and other intervenors, a public hearing, and the issuance of a final order, could take an additional 14 months to complete. Accordingly, the state regulatory process may take as long as 20 months, and that is prior to any potential challenge by EAI to the APSC's final order, which could include a petition for rehearing and subsequent appeal.

Should Entergy choose to install dry scrubbers on all four units, Entergy would be forced to make considerable expenditures within the next few years, effectively prohibiting any alternative approach. Of the approximately \$2 billion that Entergy estimates it would spend for scrubbers on White Bluff and Independence, Entergy would need to spend well in excess of \$38 million within the first year, \$150 million within 18 months, and \$305 million within 24 months.<sup>65</sup>

The work to install the dry scrubbers also would need to begin immediately to comply with the FIP's five-year deadline. During the preliminary engineering phase of the project, which is expected to take between six and 12 months, an engineer would need to develop detailed specification requirements for the engineering, procurement, and construction of the FGD systems. Contractors would need at least three months to develop proposals, and then several weeks would be required to evaluate the proposals and award the contract. Because White Bluff and Independence have different co-owners, two separate FGD contracts would need to be developed. Afterward, the FGD contractor at each plant would proceed with the detailed engineering phase, during which every component required for a complete and operable FGD system would be designed and fabricated. Next, the engineered components would be delivered to the sites and the FGD contractor at each site would erect them and integrate them into the existing plants. A tie-in outage must be taken for each unit so that physical connections to existing systems can be made. Because Entergy would not take simultaneous outages at all four units for reliability reasons, and because there would be two FGD contracts awarded at different times, the construction phase likely would be staggered by approximately one year across all four units. Once constructed, equipment startup and commissioning would occur, followed by operational tuning and performance optimization. Performance testing would then

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<sup>64</sup> EAI has elected to be regulated pursuant to Ark. Code Ann. § 23-4-1201 et seq., which provides that a public utility may choose to be regulated under a formula rate review mechanism that provides for an annual streamlined review of a public utility's rates and designation of a test period based on a projected test year. EAI's APSC-approved Rate Schedule No. 44, Formula Rate Plan Rider ("Rider FRP") provides for annual adjustment of customers' rates based on a comparison of EAI's earned return on common equity and its target return rate approved by the APSC. However, pursuant to Ark. Code Ann. § 23-4-1207 and Rider FRP, the annual Rider FRP revenue increase or decrease for each rate class shall not exceed four percent of each rate class' revenue. Accordingly, in complying with the FIP, EAI may pursue cost recovery for those costs pursuant to Rider FRP or other potential cost recovery mechanisms.

<sup>65</sup> These estimates were developed by Sargent & Lundy but do not include the significant costs for AFUDC, escalation and owner's costs that Entergy also will incur. Sargent & Lundy Memo at 5.

be conducted to confirm compliance with emission limits. The FGD contractor would need approximately three years to complete engineering and construction of one unit, followed by up to six months of commissioning, startup, performance optimization, and performance testing.

Alternatively, were Entergy to choose deactivation, the company would have to secure additional regulatory approvals as quickly as possible to provide for a smooth transition to replacement power by the 2021 deadline. The company must provide six months' notice to MISO before a generator can be retired (the "Attachment Y" process described above).

Entergy next would need to procure and build replacement power because White Bluff and Independence currently are needed for Entergy to provide reliable electricity generation to its customers and meet its obligations to MISO. Entergy's resource planning process would consist of designing, gaining regulatory approval for, constructing, and making operational a new alternative generating unit. Entergy anticipates that the replacement generation would be a combined cycle gas turbine ("CCGT"),<sup>66</sup> which may require construction of a new gas pipeline to the selected site. Depending on the site that is selected for the CCGT, rights-of-way may need to be obtained. Transmission would need to be planned and built to connect the new CCGT with the grid. To construct replacement generation as quickly as possible, Entergy must prepare an environmental permit application, prepare RFPs for the construction, select a vendor, and submit a permit application. The time required for this process means that replacement power would not be available for five years at the earliest, thus exposing customers to market capacity prices in the interim. Accordingly, planning must begin immediately to limit, as much as possible, the duration of customer exposure to market prices. In the meantime, even maintaining reliability through the purchase of power would require Entergy to accelerate planned transmission projects. A project that currently is planned to be completed in 2024 would have to be accelerated to be completed in 2020, at an additional cost of \$8 million and with a start date in 2017.

Ceasing operations at White Bluff and/or Independence would cause irreparable harm to Entergy employees and the communities in which they work. The total number of jobs created and supported by the White Bluff plant alone is estimated to be 1,237.<sup>67</sup> Entergy itself employs 105 full-time employees at White Bluff, along with 10 Entergy Service Company employees that support White Bluff full time. White Bluff also employs approximately 300 contractors for at least six weeks in the spring and fall each year for planned outage support. Additionally, there are about 20 contractors that work full time in security, coal dust management, janitorial, lawn maintenance, ash management and scaffolding support. At Independence, Entergy employs 108

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<sup>66</sup> White Bluff cannot be replaced by renewable energy. White Bluff provides approximately 1,600 MW of reliable capacity to the MISO system and there are no practical or reasonable renewable generation options to meet the MISO resource adequacy requirements currently satisfied by White Bluff. Replacement of White Bluff would require 3,200 MW of solar power (necessitating 22,000 acres of panels), or 10,000 MW of wind generation (necessitating 7,000 windmills that would have to be located in the plains states hundreds of miles away from Entergy's load). Additionally, there is insufficient biomass fuel available to supply a 1,600 MW replacement biomass plant, and even if sufficient fuel were available, it would take an impracticable amount of trucks to deliver the necessary fuel. None of these options is feasible.

<sup>67</sup> Willie Lee Brooks, Jr., Senior Analyst, Economic & Financial Risk, *What is the Economic Impact of the White Bluff Electric Power Plant?*, at 2, Arkansas Electric Cooperative Corporation (May 30, 2014), available at <http://www.arkleg.state.ar.us/assembly/2015/Meeting%20Attachments/890/I12666/HANDOUT%202%20-%20HIGHLEY%20%20Economic%20Impact%20of%20White%20Bluff%20Electric%20Pwr%20Plant.pdf>

full-time employees, along with seven Entergy Service Company employees that support Independence full time. Independence also employs 83 contractors, who provide janitorial services, maintenance support, ash disposal services, and work on insulation and scaffolding during outages. If White Bluff and Independence were to cease operations, the company would have to lay off or reassign its employees, and the contractors would be out of work. These shutdowns would have significant impacts on the rural Arkansas communities where the plants are located. For example, the estimated the value of White Bluff to the local economy is \$173 million.<sup>68</sup>

**2. Compliance with the NOx limits would immediately and irreparably harm Entergy, its co-owners, employees, customers, and communities.**

As explained above in Section III.D, the 18-month deadline to install LNB/SOFA at White Bluff and Independence is infeasible, as it does not provide sufficient time to develop, plan, permit, install, and appropriately tune the equipment. Entergy could complete installation of LNB/SOFA at all four units by the final deadline only by circumventing its normal internal procedures and the tuning and training process. Entergy would be forced to perform a more limited risk and prudence review, would have to forgo a competitive bidding process in favor of using a pre-selected vendor for fabrication and installation, and may even need to engage this vendor prior to having all regulatory approvals in hand. These procedures are in place to attempt to ensure cost recovery, and failure to comply with them puts the company at risk of making investments that the APSC later determines are not in the public interest and therefore ineligible for cost recovery. Additionally, Entergy would be forced to comply with the emission limits prior to the conclusion of its tuning and training procedures. Even with these truncated procedures, the schedule does not allow for any unforeseen issues in the installation and tuning process, which frequently arise and complicate installation or hinder the expected performance of the installed equipment.

Implementation of the Final FIP forces Entergy to choose between two untenable options □ each resulting in irreparable harm and unnecessary risk: (1) increasing costs and risk through rushed work and non-compliance with company prudence procedures, with no guarantee of FIP compliance once the work is completed, and (2) taking more time than the Final FIP permits, resulting in cessation of operation of the White Bluff and Independence units until LNB/SOFA can be installed. Beyond the fact that cessation of operations would necessitate Entergy to obtain costly replacement power on the open market, critically, it also could cause reliability issues, as generation from White Bluff and Independence is necessary for Entergy to provide reliable electricity generation to its customers and meet its obligations to MISO. In light of this, EPA must issue a stay of the deadline for compliance with the NOx limits until a more appropriate deadline can be set.

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<sup>68</sup> *Id.*

**3. A stay would prevent harm to Entergy and its co-owners, customers, and communities but would still allow Arkansas to meet its regional haze goals.**

Arkansas already is below the URP and EPA's RPGs, and thus a delay in the implementation of the FIP would not contribute to unacceptable visibility impairment. As discussed previously, the IMPROVE data for January 2014 through December 2015 show that visibility continues to improve at a greater rate than the URP in Caney Creek and Upper Buffalo.<sup>69</sup> The recent IMPROVE data also confirm that visibility in the two Arkansas Class I areas already is better than EPA's final RPGs for the areas.<sup>70</sup> Accordingly, a stay would not interfere with attainment of the URP or the RPGs.

**D. Entergy Also Meets the Four Factors that Courts Consider When Assessing Judicial Stay Requests.**

Although the judicial test for analyzing a request for a stay does not apply here, Entergy's request for stay nonetheless satisfies this test. First, as described above, Entergy has made a strong showing of likelihood of success on the merits. For the reasons explained in this Petition, the Final FIP contains significant errors and unreasonable requirements upon which Entergy was unable to comment during the period for public review, and that are not logical outgrowths of the Proposed FIP. The CAA *requires* that EPA reconsider these elements of the Final FIP. Second, Entergy would be irreparably harmed if the Final FIP is not stayed. As explained above, implementation of the FIP would force Entergy to make expensive choices about the installation of controls and possible deactivation of units in very short order. Entergy would be forced to spend significant amounts of money once these choices are made. Third, a stay of the rule would not cause harm. Visibility in Arkansas' Class I areas already is improving at a rate greater than the URP for each area, and the areas already have surpassed EPA's final RPGs for the first planning period. Implementation of SO<sub>2</sub> and NO<sub>x</sub> controls at White Bluff and Independence is not needed to achieve either the URP or the RPGs. Fourth, the balance of harms and the public interest favor a stay. A stay would prevent significant, irreparable harm to Entergy with little visibility impact, as Arkansas already has met the goals that the installation of FGD and LNB/SOFA are designed to achieve. It also would prevent the harm to employees and local communities that would ensue from the deactivation of any of the units. In light of this, a stay is appropriate and just, and should be granted.

**V. CONCLUSION**

For the reasons discussed above, Entergy urges EPA, by February 1, 2017, to reconsider and stay certain provisions of the Final FIP to avoid the harms to Entergy, its employees, co-owners, customers and local communities, as described herein.

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<sup>69</sup> Trinity Report at 3.

<sup>70</sup> See *supra* at 4.

Dated: November 23, 2016



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